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F. JACK PLUCKHAHN
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April 21, 1993

BY HAND DELIVERY

Office of the Secretary
Federal Communications Commission
1919 M Street, N.W., Room 222
Washington, D.C. 20554

Re: ET Docket No. 93-7

Dear Madam Secretary:

Enclosed for filing in the matter noted above are an original and nine copies of the Reply Comments of Matsushita Electric Corporation of America on Compatibility Between Cable Systems and Consumer Electronics Equipment.

We have also enclosed an additional copy to be date stamped and returned with the messenger for our files.

Thank you for your assistance with this matter.

Very truly yours,

F. JACK PLUCKHAHN
Vice President

Enclosures

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C.

In the Matter of	)	
	)	
Implementation of Section 17 of the Cable Television Consumer Protection and Competition Act of 1992	)	ET Docket No. 93-7
	)	
Compatibility Between Cable Systems and Consumer Electronics Equipment	)	

REPLY COMMENTS OF MATSUSHITA ELECTRIC CORPORATION OF AMERICA ON COMPATIBILITY BETWEEN CABLE SYSTEMS AND CONSUMER ELECTRONICS EQUIPMENT

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Dated: April 21, 1993

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SUMMARY OF COMMENTS

Having reviewed all the initial comments filed in this proceeding, Matsushita Electric Corporation of America ("MECA") remains confident in its position that consumers deserve, and can have, true compatibility between purchased electronics and leased cable services. In the near term cable companies ought to be obliged to choose a signal security system that does its job at the point of entry to the home. In the longer term, the Commission should establish national standards for frequencies, picture coding, compression, modulation, and multiplexing methods that depart from NTSC.

The theme of the comments made on behalf of the cable television industry is that consumers, manufacturers, retailers, and even the Congress have been wrong to expect real compatibility between purchased electronics and leased cable services. Instead, the industry offers a package of half measures. Yet, Section 17 of the 1992 Cable Act does not mandate compatibility only for some, only for a while, or only for those willing to pay more. Nor does it require compatibility at all costs. What it does demand is a balance between needs of consumers and reasonable security requirements of industry.

The cable industry proposes new, improved converter boxes as a quick fix for existing TVs and VCRs, rejecting point-of-entry or "POE" security systems such as interdiction, multichannel descrambling, and trapping. In suggesting that there will be little demand for exotic fixes such as dual

tuner boxes, the cable comments ignore the fact that most cable customers have not yet had to confront scrambling as an everyday fact of life for entire tiers of channels. Most of the changeover from clear channel signals to scrambling still lies in the future. Given this fact, can a wholesale substitution of dual tuner models really cost less than a switch to interdiction or multi-channel descrambling?

Indeed, the cable industry too easily dismisses the promise of new security technologies by using incomplete cost analyses. The single-signal, single-set, cable company-supplied converters that the cable industry supports impose additional costs, including: redundancy of integrated TV and VCR tuners, loss of competition in supplying converters, necessity of multiple converter boxes (one for every TV and VCR), expense of building multiport into new products, expense of tuner modifications, loss of accountability for product performance, general consumer confusion, and then loss of consumer investment when cable practices change again.

In contrast, the POE multi-channel, multi-set security solutions MECA supports impose none of these costs. POE security allows the design of integrated TVs and VCRs to a national standard and the competitive supply of any converter boxes necessary for non-security purposes -- without additional multi-box, multi-tuner, multi-port costs.

In addition, the cable industry's technical criticisms of point-of-entry security measures are based on invalid assumptions: just because security descrambling occurs at

point of entry does not mean that decompression need occur there, as well. A digital standard would allow decompression, as well as all other receiving functions, to be performed by the consumer's TV or VCR.

The cable industry attempts to shift the focus of this proceeding from regulation of cable industry practices to regulation of consumer electronics products. To this end, the cable comments seize on the limited grant of authority to define the label "cable ready." Almost mystically, it is assumed that power over the label confers power over the products themselves. The real significance of defining "cable ready" is that the effort makes sense only if there are to be standards binding on the cable industry. Without such standards, a manufacturer selling a set as "cable ready" is shooting at a moving target.

Proposals for a "Multiport" approach do not withstand scrutiny. Even the cable filings recognize that the original Multiport design is obsolete. Reliance on any such approach, in present circumstances, would be destructive of quality and,

- ▷ The annual cost to consumers of a Multiport approach -- extra descrambler boxes, ports, and other circuit changes advocated by the cable industry -- would be huge. Yet neither compatibility nor TV or VCR performance would be assured for the long term.

- ▷ Although the cable industry now proposes a return to Multiport, it is not clear that the industry means to support Multiport, or any port, in a digital environment.

- ▷ Even if Multiport or replaceable tuners are considered "optional," resorting to labels or assurances of optionality does not make an uneconomic system economical, or assure compatibility where none will be achieved. If a port system is identified as the only "answer" to compatibility, it matters little whether it is labeled "optional" or "mandatory," because the costs, economics, and consumer uncertainties will be the same.

MECA believes that the day of the functionally integrated television and VCR is far from over. The design, component, and manufacturing efficiencies achieved through integration play too large a role in the industry's ability to supply sets to virtually every household at reasonable prices. But even when, and if, integration is no longer possible -- as in the supply of digital converters for present TV sets -- competition is. There is a fundamental consumer benefit from competition in the supply of electronic devices to consumers. There is a fundamental cost in denying competition.

Before the
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REPLY COMMENTS OF
MATSUSHITA ELECTRIC CORPORATION OF AMERICA
ON COMPATIBILITY BETWEEN CABLE SYSTEMS
AND CONSUMER ELECTRONICS EQUIPMENT

Matsushita Electric Corporation of America ("MECA") respectfully submits these reply comments with respect to the Federal Communications Commission ("FCC" or "Commission") Notice of Inquiry issued on January 29, 1993, in the above-captioned proceeding. The Commission invited comments on the nature and extent of the compatibility problems encountered by consumers with respect to cable television systems and consumer electronics products. It asked for both information and proposed solutions as to present problems and future technology. MECA submitted initial comments on March 22, and now replies to some of the other comments submitted at that time.

INTRODUCTION

In its initial comments, MECA said that the main purpose of business in general, and this proceeding in particular, should be to serve consumer interests. We argued that 50

years of television have shown that these interests are best served by consumer ownership of electronics, integral units that work predictably and reliably in any part of the United States, and, most of all, competition in building and offering electronics products.

We said we were concerned about the compatibility of cable television systems with consumer electronics equipment because consumers' problems, to date, appear to be only the "tip of the iceberg." While compatibility is gradually being degraded in conventional cable systems, more profound degradations seem in store as systems convert to various means of digital signal compression and transmission.

The filings on behalf of the cable television industry cause MECA to believe that its concerns are justified. First, the industry's filings make clear that for most cable consumers, routine scrambling, and mandatory converter boxes, are only now about to be introduced into their lives. Ironically, according to the cable television industry, it is other provisions of the Cable Television Consumer Protection and Competition Act of 1992 (the "Cable Act") itself that will cause local systems to re-channelize, and to scramble most non-premium cable programs. Thus, <u>scrambling is about to become the rule, rather than the exception</u>.

Second, it is clear from the filings that the age of digitally compressed signals is virtually upon us. Based on the filings, and other public announcements, one can expect the introduction of about two million set top digital/analog

converter units during 1994. There is still no assurance that these units will use a common transmission or compression standard.

Third, in its initial comments the cable television industry has not offered to accept any significant responsibility for consumer compatibility problems to date. Nor does it wish to adjust its business plans for the future. Point-of-entry signal security technology, which seems the best hope for the installed base of consumer equipment, as well as for the future, is rejected, on the one hand, as "untried." Digital standards for compression and transmission are rejected, on the other hand, as "developing too fast."

MECA shares the cable industry's excitement in the technological future, and looks forward to a media revolution. But we think it is arbitrary and resists the will of Congress to assign consumers the most passive role possible. Putting marketing ideals to one side, it is possible and desirable for consumers to continue to choose all of their own equipment, and for MECA and other electronics manufacturers to compete in providing that equipment.

Technology poses the compatibility problem, but also provides the answer. There are alternatives to scrambling and monopoly. The solution need not be at the expense of cable companies, but it is possible only with the cooperation of the cable television industry.

This Is No Time To End the Competition Between Media and Electronics

Since the first movie theater, media services and consumer-owned electronics have been in competition. The movie house had a monopoly, until the arrival of an electronics innovation, consumer-owned television. Next came community antennas, and delivery of television signals by cable, a media service innovation. Cable services were stifled for years, at the behest of movie and broadcast interests, but ultimately escaped excessive regulation.

Then came a consumer-owned electronics revolution, the VCR. The VCR initially was resisted by the movie studios, who in their entire histories had only leased, never sold, their product. It was welcomed by the cable industry. But as movie rental and video stores developed, the VCR spawned a direct competitor for premium "movie channel" services. This cycle of competition -- media advance, consumer electronics advance, media advance, consumer electronics advance -- has been nothing but healthy for consumers.

Today, it seems fair to say that the cable industry sees a chance to break the competitive cycle. Digital compression, conditional access, and interactive services mean that rented, media-based services can challenge the present reliance on consumer-purchased equipment. Premium cable services might, or might not, make movie rental obsolete. At the very least,

To the challenge from media-based services, MECA says "Fair enough." What is troubling about the cable industry comments is that the industry now seeks leverage, through this proceeding, over basic competition from consumer-owned electronics. Just as, for years, other media industries denied consumers competition from cable services on questionable grounds, the cable industry now would deny competition in cable-compatible devices, based, essentially, on an assertion that its favored approach to signal security is the only approach.

No previous attempt to "win" the media/electronics competition succeeded, nor will this one, whatever the Commission decides. Regulation, like King Canute, cannot whip back the tide. It would be a shame, however, if negative attitudes toward competition, compatibility, and standards were to prevail even for a while. Competition, and consumer convenience, can be suppressed for years at a time, until technology flows around the obstacle. Section 17 of the Cable Act was meant to tear down, rather than establish, such barriers to competition. MECA is confident that the Commission will not be deterred from this purpose.

I. MECA AGREES WITH AND SUPPORTS THE COMMENTS OF THE CONSUMER ELECTRONICS GROUP OF THE ELECTRONIC INDUSTRIES ASSOCIATION

As an active member of the Consumer Electronics Group of the Electronic Industries Association ("EIA/CEG"), MECA supports the comments and positions of its industry association. The electronics industry recognizes the challenge posed by this legislation. We believe its conduct and positions have been forward looking and responsible.

EIA/CEG played a role in two comments submitted to the Commission -- its own, and one prepared jointly with the cable industry, Comments of the Cable-Consumer Electronics Compatibility Advisory Group. MECA supports the joint

consumer-friendly environment. MECA will continue to support its industry association in working toward such a result.

II. MECA ADHERES TO ITS BELIEF THAT COMPATIBILITY CAN BE ACHIEVED IN THE NEAR TERM THROUGH POINT-OF-ENTRY TECHNOLOGY AND IN THE LONG-TERM THROUGH STANDARDS

In its initial comments, MECA addressed near-term compatibility problems that are beginning to arise from conventional scrambling, and long-term, basic problems posed by more fundamental means of encryption, such as digital compression. In the near term, we said, cable companies ought to be obliged to choose a signal security system that does its job at the point of entry to the home. In the longer term, the Commission should establish national standards for frequencies, picture coding, compression, modulation, and multiplexing methods that depart from NTSC.

Having reviewed all the initial comments, MECA remains confident in its position that consumers deserve, and can have, true compatibility between purchased electronics and

III. COMMENTS OF THE CABLE TELEVISION INDUSTRY SHOW TOO LITTLE REGARD FOR THE NEEDS OF CONSUMERS AND THE PROMISE OF NEW TECHNOLOGY

The theme of the comments made on behalf of the cable television industry, and its association, is that consumers are wrong to expect real compatibility between purchased electronics and leased services; manufacturers and retailers are wrong in encouraging consumers to believe such compatibility is possible; and Congress is wrong to expect government and industry to arrive at such a solution. Instead, the industry offers a package of half measures.

A. The Measures Proposed By the Cable Industry Comport With Neither Statutory Language Nor Intent

Section 17 of the Cable Act does not mandate compatibility only for some, only for a while, or only for those willing to pay more. Nor does it require compatibility at all costs. What it does demand is a balance between needs of consumers and reasonable security requirements of industry.

That consumer needs may be balanced by regard for cable industry security does not suggest that they are secondary, may be ignored, or may be met only at a price. Nor did Congress mean to suggest, as do several cable filings, that the main problem is not consumer need at all, but, rather, unrealistic consumer expectations.

Clearly Congress did expect that compatibility problems would be solved by restoring competition in devices that tune cable signals. And Congress, just as clearly, identified

cable industry practices as causing the compatibility problem. Clearly Congress expected that cable industry reforms would be required to solve it.

Unfortunately, the initial comments indicate that the cable industry hopes to address compatibility problems without

1. "Multiport" would not save compatibility of existing sets

The EIA 563 "Multiport" standard is a system negotiated several years ago by the cable industry with the electronics industry, but never supported by the cable industry. Today it is obsolete. But for this proceeding, the cable industry gladly would have consigned it to oblivion. That it has now been revived and, hundreds of millions of products later, is seized upon as the "solution" to compatibility, only proves the value of the old adage: any port in a storm.

Unfortunately, even if Multiport were the solution for new products,[1/] it cannot be retrofitted to the 300 million color televisions and VCRs now in the hands of consumers. On this point, at least, the cable television and consumer electronics industries agree.

As the cable television industry points out in other contexts, modern televisions seldom need repair, and last a long time. It seems both arbitrary and capricious to declare that the "solution" to cable compatibility is a system that consigns almost every TV and VCR now in existence to permanent redundancy.

[1/] At pages 19-26 below, we discuss why Multiport is not an economical system for new TVs and VCRs, either.

2. Alternative, passive compatibility measures would be costly and wasteful if implemented with any seriousness

Recognizing that the "Multiport" approach would do nothing for owners of today's TVs and VCRs, the cable industry comments suggest that, for an additional fee, systems might provide some consumers with converter boxes with dual tuners, and other auxiliary devices. The cable industry comments argue, however, that only a handful of consumers really care about using TV or VCR features or integral tuners, so only a relative handful may be expected to ask for the special equipment.

In suggesting that there will be little demand for exotic fixes such as dual tuner boxes, the cable industry comments ignore the fact that most cable consumers have not yet had to confront scrambling as an everyday fact of life for entire tiers of channels. Once consumers have been inconvenienced in large numbers, how many dual tuner converters will actually be offered? And on what terms?

If, as we suspect, the supply will be few and the price high, consumers will be left with no viable means for restoring compatibility to their existing TVs and VCRs. If we are wrong, and every cable system scraps all of its existing converter boxes and replaces them with much more expensive dual tuner models, and other auxiliary devices, how much will this cost? Can a wholesale substitution of dual tuner models really cost less than a switch to interdiction or multi-channel descrambling?

Assuming that the cable industry does not intend to replace all converter boxes with dual tuner models, the age of scrambling will see a severe chill in consumers' ability and incentive to use the television and VCR features they have paid for. This is the opposite of the result sought by Section 17.

C. The Cable Industry Too Easily Dismisses the Promise of New Security Technologies

In claiming that signal security technologies that provide more than one descrambled signal to more than one TV or VCR are impractical or too expensive, the cable industry filings perform an incomplete comparison. They compare, head-to-head, the cost of the present system of addressable, descrambling, set-top converters, to the cost of point-of-entry systems such as interdiction or multi-channel descrambling. They may or may not be right in concluding that so compared, single-signal descrambling is cheaper. But such a comparison ignores more than it includes.

Single-signal, single-set descrambling imposes additional compatibility costs on consumers. Multi-channel descrambling and interdiction save compatibility costs.[2/] Any cost comparison should be of the total cost to consumers of the approach chosen.

[2/] Until now -- while comprehensive signal scrambling is still relatively rare -- all such "compatibility costs could be considered marginal (although they were sufficient to compel Section 17 of the Cable Act, and this proceeding). This will no longer be the case.

Throughout the balance of this filing, we list the areas in which single-signal, single-set, cable company-supplied converters impose costs: redundancy of integrated TV and VCR tuners, loss of competition in supplying converters, necessity of multiple converter boxes (one for every TV and VCR)

industry, in comparing single-set, single-signal descrambling with the newer alternatives.

1. In light of the substantial savings elsewhere, the Commission should consider allowing cable systems to charge more for multiple-signal, multiple-set security systems

Ultimately, whether through regulated fees to lease converters, or through purchases of electronics equipment, the consumer pays the tab. If the Commission would set a digital standard, and require the use of multiple-signal, multiple-set security systems, it seems evident to MECA that the overall cost to consumers, all factors considered, would be less; consumer convenience would be enhanced; and Congress's compatibility mandate would be met.

Considered in isolation, it may be that the marginal cost of implementing a technique such as multi-signal descrambling may be more than the marginal cost of supplying single-signal converters. If so, it would be reasonable to allow cable systems to charge more for POE service, because additional consumer costs, in purchasing cable services and consumer electronics equipment, are avoided. In the long run, the elimination of extra cost and redundancy in customer-owned equipment, plus freedom from having to rent converter boxes, will more than justify the rent allocated to the point-of-entry security system.

2. The cable industry's technical criticisms of point-of-entry security measures are based on invalid assumptions

Cable industry criticisms of new, alternative security techniques seem based primarily on a reluctance to depart from an idealized vision of the future, in which only cable-provided hardware plays any role. Once the assumption of such a future falls away, so do the criticisms of alternative techniques.

An example of tunnel vision with respect to point-of-entry systems is the comment in the Time Warner filing that multi-channel descrambling could not work in a digitally compressed environment, because after point-of-entry recompression, a 5 GHz bus would be needed to transport the signals to the consumer's equipment. This comment reflects the cable industry assumption that no digital processing, such as decompression, could be performed by the TV or VCR itself.

Just because security descrambling occurs at point of entry does not mean that decompression need occur there, as well. A digital standard would allow decompression, as well as all other receiving functions, to be performed by the consumer's TV or VCR. Security descrambling could still occur at point of entry, without the necessity for decompression

occurring there, as well.[4/] Hence, there would be no need for a 5 GHz bus.

IV. THE COMMISSION SHOULD NOT ACCEPT THE CABLE

of consumer electronics devices, requiring a formulation of requirements to be satisfied before the label "cable ready" can be applied.

Step 1: redefine the core problem. The problem is not, really, compatibility. Rather, it is labeling.

The industry argues that it is the unrealistic expectations of consumers, rather than true compatibility problems, that made this proceeding necessary. Hence, the solution ought to be consumer "education." The key to consumer education is, cable says, the lowering of expectations at retail, through labeling.

Step 2: use authority over cable-ready labeling to regulate cable-ready products.

Unable to point to statutory authority over consumer electronics products, the comments seize instead on the grant of authority to define the label "cable ready." Almost mystically, it is assumed that power over the label confers power over the products themselves.

Step 3: argue that products not bearing the regulated label must also be subject to regulation.

The argument is further extended: if products that bear the regulated label are subject to regulation, then surely, products that cannot qualify for the label are more dangerous and confusing to consumers, so these products need to be regulated as well! Thus, in three steps, the argument begins